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When common sense just won't do: Misconceptions about changing the behaviour of road users

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SUMMARY

This paper examines the paradox that a number of road safety measures popular with the general community have not proven cost-effective when subjected to rigorous evaluation. While examples of this can be found throughout road safety, it is perhaps most pronounced in the case of behavioural approaches. To demonstrate this point, the paper reviews a number of behavioural measures which have widespread community support, but limited road safety effectiveness, including driver training programs, harsher penalties, and the isolated use of mass media road safety campaigns.

Community support for these measures is often linked to their intuitive appeal. From the road users perspective it appears a matter of 'common sense' that they are effective. However, on closer inspection, this support is often based on misconceptions about crash causation, road user behaviour or ways of achieving behaviour change.

Two important implications emerge from this review. Firstly, in order to achieve their objectives, road user safety measures need to be based on sound behavioural principles, rather than on 'common sense' or intuition. Secondly, road safety agencies need to actively promote the effectiveness of successful road safety measures. This will not only improve support for these measures, but assist in shaping community perceptions about safe behaviour, which may in turn contribute to the acceptance of new approaches.

INTRODUCTION

As part of a major review of the effectiveness of education, publicity and training in road safety, Henderson (1991, p.5) commented:

> *Measures centred on changing human behaviour . . . must, if they are to be successful, be based on a proper appreciation of how and why people act as they do on the roads. Without such appreciation, the whole behavioural approach to road safety is simply a matter of 'common sense', and in the past this has been found wanting.*

Henderson's comments immediately appear reasonable from a theoretical perspective. However, underlying these comments is a very important practical concern: many of the behavioural approaches implemented in the past have lacked a firm scientific foundation, which has contributed to their lack of effectiveness.

In keeping with these concerns, this paper examines the paradox that there are a range of behavioural approaches with widespread community support, which have not proven cost-effective when

subjected to rigorous evaluation. As will be discussed, public and political support for these approaches often appears to continue unabated, despite the existence of contrary evidence.

It could be countered that community views are irrelevant to the process of developing and implementing road safety measures. However, as noted by Elliott (1992, p.6):

> *Some key road safety countermeasures have been demonstrated to be effective and have been widely adopted. However missionary zeal and/or a desire to 'alleviate the carnage' often means pressure is applied to road safety authorities and to politicians* ***to do something***.

Consequently, it is important to examine the factors that account for this paradox, to better understand its impact on the development and implementation of road safety countermeasures.

PUBLIC PERCEPTIONS TOWARD ROAD SAFETY

The findings of community surveys tend to suggest that the media play a major role in shaping perceptions toward road safety. For example, an analysis of over 4500 responses received in an NRMA survey indicated that the most often cited factors contributing to crashes were speeding, drink driving and fatigue. This list closely reflected the content of road safety publicity campaigns being conducted in NSW at the time (Watson & Booth, 1992).

On-going surveying of community attitudes by the Federal Office of Road Safety has also revealed a similar set of concerns (FORS, 1996). Interestingly, public concern about driver fatigue began to grow in the early 1990s (FORS, 1990), alongside the increased attention this issue received in government publicity campaigns and in media coverage of road crashes.

While also influenced by the media, public perceptions toward road safety solutions appear to be much more diverse. The NRMA survey revealed a broad range of perceptions about ways to improve the safety of vehicles, the road environment and road users. In many cases, the suggestions were diametrically opposed to one another, particularly in the behavioural area. For example, while many respondents argued that there was a need to heighten the visibility of police enforcement, others advocated the use of covert surveillance techniques such as unmarked police vehicles or 'hidden' speed cameras (Watson & Booth, 1992).

As noted earlier, public perceptions toward road safety solutions/measures do not necessarily align with the available road safety evidence. In one respect, this is not surprising since the public would not be generally aware of trends in road safety research. However, what is of interest is the variability in their perceptions. For example, strong support is shown for some programs which have been shown to be cost-effective, such as seat belts, Random Breath Testing (FORS, 1990) and road and vehicle improvements (Watson & Booth, 1992). However, other approaches advocated by the public are often not supported by the available evidence (Watson & Booth, 1992; RTA, 1995a,1995b).

This paradox appears to apply across the road safety spectrum. The NRMA survey found examples of it in the areas of vehicle safety (eg. support for the non-crumple characteristics of older vehicles) and road environment safety (eg. support for the widespread use of unrestricted speed zones). However, it was most apparent in the case of behavioural approaches, particularly in relation to driver improvement (Watson & Booth, 1992).

While not an exhaustive list, the types of behavioural approaches widely supported by the public which have not been shown to be cost-effective include:

- specialised or intensive driver training programs for novice and general drivers;

- stricter licence testing procedures;
- harsher traffic offence penalties;
- the isolated use of mass media campaigns;
- the use of fear-based graphic/shock tactics in road safety publicity; and
- the widespread use of unmarked police vehicles (Watson & Booth, 1992; RTA, 1995a, 1995b; Watson *et al*, 1996).

Public perceptions in this area are also quite resistant to change, even in the face of contradictory information (eg. Higgins, 1995). This is well shown in the following summary of focus group work conducted with Queensland drivers:

> *There was a strong perception among participants that the government should do something about the training of novice drivers. Many believe that the answer is compulsory defensive driver training for novice drivers. Interestingly, issues of effectiveness, access and cost tended to be glossed over as the ends justified the means. Other options are rarely considered but anything is welcomed* (Watson et al, 1996, p.24-25).

Why do the public support these approaches, despite the lack of evidence that they are effective? Firstly, as noted earlier, the media appears to exert a powerful influence on public attitudes and perceptions toward road safety. Indeed, the strong support for seat belts and RBT revealed in community surveys is probably linked to the generally positive coverage these measures have received in the Australian media. Interestingly, advanced and defensive driver training programs also tend to receive positive coverage in the media, despite the lack of clear evidence for these approaches.

However, while media coverage undoubtedly influences public perceptions, it also tends to reflect and reinforce prevailing community beliefs and expectations. Therefore, although the media may be a contributing factor, it would not appear a sufficient force by itself to account for the paradox. In particular, it would appear insufficient to explain why some perceptions are resistant to change.

A second possible factor accounting for the paradox is the tendency for drivers to place a greater emphasis on their own experiences, than the views of experts. As noted by Shinar (1978, p.130), there "*is a problem in modifying human behaviour that is unique to the area of driving, everybody thinks he or she is an expert"*. In other words, in cases where a behavioural approach appears to be intuitively consistent with a driver's own experiences, they may be more prepared to ignore contradictory scientific evidence or 'expert' opinion. For example, a driver who is involved in an incident where their vehicle skidded out of control may be reluctant to accept that skid training would not be of some benefit in reducing crashes.

Once again, while this may be a contributing factor it would not appear sufficient to account for the paradox. In particular, it does not adequately explain why some approaches appear intuitively more valid to the public than others. To better explain the paradox there is a need to investigate the attitudes and beliefs that underpin public perceptions towards road user behaviour and the approaches in question.

METHOD

Three case studies have been selected to illustrate the paradox and to examine the attitudes and beliefs underpinning community support for the approaches. The case studies relate to:

1. driver training programs;
2. traffic offence penalties; and

3. mass media road safety campaigns.

These particular case studies have been selected to highlight differing approaches from the behavioural field. The evidence presented draws on Australian research wherever possible, reflecting the community context in question. However, international evidence is also cited to confirm the validity of the Australian research.

CASE STUDY 1: DRIVER TRAINING PROGRAMS

Overview

There is a strong public perception that more intensive driver training is required to improve the safety of drivers, particularly young or novice drivers (Watson & Booth, 1992; RTA ,1995a, 1995b).

> *Intuitively, it should be possible to learn to drive safely, just as we learn many other skills in our lives. Not surprisingly, there is a strong perception within the community that driver training is effective in preparing drivers and reducing their future crash risk* (Watson et al, 1996, p.48).

This approach has received considerable attention from road safety practitioners and researchers throughout the world, particularly in North America and Europe. However, there is no clear evidence from Australia or elsewhere that specialised driver training programs produce safer drivers than conventional methods of learning to drive. Consequently, many researchers have argued that driver training is not a panacea for improving driver behaviour (Saffron, 1981; Henderson, 1991; Horneman, 1993; Christie, 1995; Watson et al, 1996).

The evidence

The early evaluations of high school driver education courses in the USA were very encouraging. However, many of these evaluations were plagued by methodological problems (eg. the use of self-selected samples), a persistent feature of research in this area (Henderson, 1991; Horneman, 1993).

Between 1977 and 1981, a major evaluation of a high school driver education was undertaken in DeKalb County, Georgia. This study involved the random allocation of over 18,000 students to either a comprehensive 70 hour safe driving course, a cut-down 30 hour course or a control group who received no formal training (Stock et al, 1983). The results, although mixed, were not generally positive. While the participants in the training courses had fewer crashes and fewer violations during the first six months of driving, compared to the control group, the differences became marginal within the next year and disappeared after a year and a half (Stock et al, 1983; Henderson, 1991). Moreover, in absolute terms the short-term benefits were negated by the overall impact of the program on licensing patterns and crash involvement. The students who undertook the program generally obtained their licences earlier, resulting in an increased potential for them to be involved in crashes. This resulted in the experimental groups having an overall level of crash involvement higher than the control group (Lund, Williams & Zador, 1986).

In 1983, the Canadian Province of Quebec introduced mandatory driver training for all new drivers. An evaluation found that the training had no appreciable effect on the risk of crashing or the risk of being injured among newly licensed drivers. Moreover, the introduction of the law appeared to be associated with a decrease in the average age at which young women obtained their licence, increasing their exposure and crash involvement (Macdonald, Bowland & Triggs, 1992; Henderson, 1991). Quebec plans to discontinue mandatory formal training in 1997, replacing it with a probationary system featuring a 12 month learner period (Watson et al, 1996).

A recent analysis of driver training and licensing systems in Europe concluded "*there was no evidence that the differences in the national systems produced major differences at the level of national casualty totals"* (Lynam & Twisk, 1995, p.1). More specifically, they concluded that the crash rates of drivers who primarily learnt through practice with relatives or friends seemed no different to those who were wholly or mainly trained by professional instructors. Consequently, in a number of countries, there has been a major shift in emphasis away from extensive mandatory driver training toward more encouragement of private tuition and practice.

Very few evaluations of novice driver training have been conducted in Australia. Two courses which have been evaluated in Victoria and South Australia found no evidence of crash reduction benefits (Christie, 1995). While a NSW study of driver judgement training found that subjects exposed to the training performed better than a control group in an off-road test assessing safety-related behaviours, no attempt was made to monitor the crash experience of the participants (Telfer et al, 1987).

The lack of evidence in favour of novice driver training is also reflected in evaluations of post-licence training provided for general drivers and traffic offenders. A seminal research study in this area examined 16 controlled studies into the effects of defensive driving courses, mainly operating in the USA (Lund & Williams, 1985). While many of the studies had design flaws, the methodologically strong evaluations showed reductions in violations, but no consistent effect on crashes. An evaluation of the Queensland Defensive Driving Course (DDC) concluded that the course did not reduce crashes among 17 - 19 year olds and that it may be harmful to this age group (Payne, Brownlea & Hall, 1984). While there was some evidence that the course was of benefit to male drivers between 20 - 39 years of age who drive as an occupation, these benefits did not exceed the cost of the program.

In addition, there is some evidence that certain driver training programs can have a deleterious effect. In the 1980s, the Norwegian Government introduced a two-phase novice driver training program featuring training in night-time and slippery surface conditions. An evaluation found that while the night-time driving course reduced the crash risk of participants for a couple of years following the training, the slippery surface course increased their crash risk (Glad, 1988 in Lynam & Twisk, 1995). It has been suggested that courses which teach more advanced skills, such as skid control, can actually contribute to an increase in crash rates by instilling a sense of over-confidence in participants (RTA, 1995a).

In contrast, there is a growing body of thought that driver training is more effective with certain specialist drivers, including motorcyclists, heavy vehicle and fleet drivers. For example, while there is a lack of hard research evidence confirming its effectiveness (Henderson, 1991; Job, 1995; Christie, 1995), there is a growing body of anecdotal evidence that driver training with fleets can reduce crashes and encourage improved behaviour (Watson et al, 1996). It has been suggested that post-licence training may be more effective in the fleet setting due to motivational factors (Job, 1995; Watson et al, 1996). For example, fleet management programs typically involve a variety of interventions besides training, including: rigorous recruitment procedures; incentives for improved performance; workplace health and safety improvements; and the provision of a counselling service. In effect, these programs are designed to improve the safety performance of fleet drivers by promoting cultural change within organisations (Watson et al, 1996).

Public misconceptions about driver training and behaviour

Traditionally, driver training programs have tended to concentrate on improving knowledge and vehicle handling skills (Saffron, 1981; Horneman, 1995; Christie, 1995; Higgins, 1995). In keeping with this, those who advocate the need for more driver training tend to stress the importance of

practical 'vehicle-oriented' training (Watson & Booth, 1992). While many of these tend to associate driver training with the learning of 'defensive' driving skills (designed to assist drivers to recognise and avoid potential hazards), others stress the value of 'advanced' skills (designed to assist in emergency situations). Irrespective of its orientation, this emphasis on practical driving skills confuses the notion of 'proficient' driving with 'safe' driving, and is based on a number of misconceptions about the causes of crashes and the nature of driver behaviour.

Firstly, the available evidence indicates that lack of knowledge or inadequate vehicle control skills is not a major contributor to road crashes. As noted by Christie (1995, p.3):

> *. . . various road safety authorities and researchers around the motorised world have been unable to find clear evidence of a link between car driving skills (or lack thereof) and road trauma. In-depth studies of vehicle crashes have found driving skill deficiencies to be relevant in less than 5% of crash involvements in Australia and the USA.*

In contrast, there is growing evidence that skill deficits associated with incomplete perceptual and cognitive development play a major role in young driver crashes. As a result, there have been increasing calls for driver training programs to give greater emphasis to these skills, particularly hazard recognition and risk perception (Catchpole et al, 1994; Lynam & Twisk, 1995; Job, 1995).

Secondly, it is difficult to modify the driving skills of the average driver in a permanent way. For example, French research has indicated that drivers trained in emergency vehicle control procedures (*eg.* braking and/or swerving) quickly regress to pre-training behaviours in emergency situations. In particular, the automatic behaviour which even highly trained drivers tend to revert to in a crisis is braking (rather than swerving or a combination of actions), irrespective of whether this is the most appropriate response to the situation (Malaterre, 1989 in Christie, 1995). These findings reflect the inevitable tendency for people to lose competence in behaviours or skills which they do not practice or perform regularly.

Thirdly, because crashes are relatively rare events, drivers come to realise that illegal or risky driving behaviours do not necessarily lead to crashes. In effect, their on-road experience builds durable behavioural patterns, which are difficult for driver training to modify. As summarised by Christie (1995, p.7):

> *Low probability of occurrence and decay of learning tend, therefore, to work against driver training programs which concentrate on car control skills or dealing with rare events of an emergency nature. This is despite the high motivation which many trainees often bring to driver training and their enthusiastic response to the content of the training program.*

Finally, the emphasis on practical driving skills ignores the powerful influence that motivational and attitudinal factors can exert on driver behaviour. As noted by Higgins (1995, p.17), as "a *road trauma countermeasure, traditional skills-based driver training presupposes that motorists are motivated to drive safely . . . A fundamental flaw is that there is no correlation between driving skill and driving behaviour*". A range of personal goals or motives can influence the way people drive and these may often conflict with safety-related goals (Watson et al, 1996). For example, recent Australian research has shown that the over-involvement of young drivers in road crashes is related to both driver inexperience and high levels of 'recklessness' (Catchpole et al, 1994). Consequently, increasing attention is being given to issues such as risk-taking, over-confidence, peer pressure and drink/drug driving.

Based on the available evidence, it has been argued that driver training needs to better address the wide range of perceptual, cognitive, motivational and attitudinal factors which influence driver

judgement and decision-making (Saffron, 1981; Catchpole et al, 1994; Higgins, 1995; Lynam & Twisk, 1995; Job, 1995; Christie, 1995, Watson et al, 1996). There is a strong awareness of these issues among driver training practitioners and increasing attempts to re-orient driver training programs to achieve these goals. One possible avenue is to examine the motivational factors, referred to earlier, which may be contributing to the impact of driver training in the fleet setting (Watson et al, 1996). At this point in time, however, the likelihood of developing more effective driver training programs, particularly for novice drivers, remains unclear.

CASE STUDY 2: TRAFFIC OFFENCE PENALTIES

Overview

There is a perception within the community that traffic offence penalties need to be harsher. For example, the NRMA survey found that the:

> . . . *most frequent suggestions involved harsher penalties, particularly for speeding and drink-driving offences. Many of these were very draconian, involving the greater use of gaol sentences, longer licence cancellations, and vehicle impounding* (Watson & Booth, 1992, p.209).

Underpinning these suggestions appears to be the belief that more severe penalties will deter the general driving population from committing traffic offences. While this assertion may be appealing, it involves a misunderstanding about road user behaviour change. This can be illustrated by examining the evidence relating to the use of harsher penalties.

The evidence

Available evidence tends to suggest that it is factors other than the severity of punishment which appear to have the strongest influence on driver behaviour. Nichols and Ross (1990) conducted an extensive review of the literature relating to legal penalties for drink-drivers. They concluded that policies based on increasing the certainty and swiftness of punishment had more frequently been shown to be successful than those based on increasing the severity of punishment. In addition, policies based on severity appeared to entail greater costs in their implementation. A study by Vingilis et al (1990) found that licence suspensions were consistently related to road safety benefits. In contrast, more severe penalties (eg. higher fines for first offenders and longer gaol terms for multiple offenders) were associated with more crashes and convictions.

The Australian experience with RBT tends to confirm these findings. Its implementation has generally featured the use of highly visible police enforcement, reinforced by publicity, to modify driver behaviour. Underpinning the threat of RBT was the existence of minimum, rather than severe, penalties for drink driving (Watson et al, 1996). Based on the evidence, Homel (1990) has argued that penalties for drink-driving should not be too severe, but should be applied with close to one hundred percent certainty to convicted offenders. Fines of a few hundred dollars and licence suspensions of a few months are sufficient. "*Imprisonment is unnecessary, costly, and counterproductive*" (Homel, 1990, p.14).

Similarly, there is a lack of evidence that increasing the severity of penalties for speeding is an effective deterrent. For example, no attributable change in speeding behaviour was observed in Sweden after a doubling of speeding fines in 1982, nor when the fines were further increased in 1987 (Fildes & Lee, 1993).

Public misconceptions about the role of penalties

Public support for harsher penalties is presumably based on the belief that it is the severity of punishment which primarily motivates drivers to obey the law. However, the evidence strongly suggests that it is the perceived certainty of detection and punishment, rather than the severity of a penalty, that has the greatest influence on road user behaviour. In lay terms, a harsh penalty will not seem that threatening to drivers if they perceive there is little chance of being caught and charged for breaking a particular traffic law.

The evidence is consistent with the traditional model of deterrence which suggests that the effectiveness of a legal threat is a product of the perceived certainty, severity, and swiftness of punishment (Homel, 1990). The findings do not necessarily imply that the severity of penalties is of no consequence. Rather, they suggest that it is the existence of a penalty, rather than a very severe penalty, which is most crucial for achieving a deterrent effect in road safety (Fildes & Lee, 1993).

CASE STUDY 3: MASS MEDIA CAMPAIGNS

Overview

There is strong perception in the community that mass media publicity campaigns, particularly those utilising TV advertising, are an effective means of changing driver behaviour (Watson & Booth, 1992; RTA, 1995b). This belief has probably been reinforced by the amount of resources that have been directed into mass media advertising by state and federal road safety agencies over the last two to three decades. The very high profile nature of mass media publicity also tends to give the impression that it is a very successful 'stand alone' measure, capable of targeting a wide range of behaviours and circumstances. However, the available evidence suggests that mass media publicity in isolation is insufficient to alter entrenched behaviours (Elliott, 1992).

> *The view if the general public seems to be that the way to address any behavioural problem is through education: in schools, by driver training or in the mass media. However, experience has shown that education, while certainly necessary, is rarely sufficient* (RTA, 1995b, p.4).

The evidence

A major meta analysis of road safety publicity campaigns recently conducted by Elliott (1993) has confirmed that mass media approaches can be effective if they are used to support other measures. While many mass media campaigns are not evaluated, the evidence suggests that they have had a greater impact in Australia, compared to the rest of the world. This reflects the tendency for Australian authorities to use mass media to support other legislative and enforcement initiatives. Two other key findings of Elliott (1993) were that campaigns requesting behaviour change or modification are more successful than those of an educational/informational nature and that those that are soundly based on theory are more successful than campaigns based on intuition.

These findings were confirmed by an evaluation of the joint enforcement and publicity activities undertaken in Victoria during the early 1990s (Cameron et al, 1993). This study found a clear link between the levels of publicity used to support the speed and alcohol enforcement programs and the subsequent reductions in casualty crashes experienced in Victoria. However, the road safety effects of similar publicity campaigns with themes unrelated to enforcement (eg. concentrating while driving) were less clear. While they appeared to raise awareness of the issue, there was no conclusive evidence that they led to reductions in crash involvement among the target group.

The lack of evidence that mass media campaigns are effective in changing behaviour when used in isolation was well expressed by Elliott (1992, p.55):

Given the incidence of speeding behaviours defined strictly as exceeding the signposted speed limit, mass media alone is extremely unlikely to have any measurable effect on speeding behaviours. However, if used in conjunction with other strategies . . . there can be a synergistic effect.

Public misconceptions about mass media campaigns

A number of factors would appear to contribute to the tendency for the public to over-estimate the effectiveness of mass media campaigns. Firstly, as mentioned earlier, the high profile nature of mass media campaigns probably serves to create the impression that they are the 'cornerstones' of road safety initiatives. For example, over the course of a year most people will view far more anti drink driving advertisements on television than be tested at RBT stations. Under these circumstances, it is understandable that many people will attribute reported changes in behaviour to the activity that they are most familiar with, namely mass media publicity.

Over and above this, the strong belief in the effectiveness of mass media campaigns tends to be based on a misunderstanding of its impact on driver behaviour. At the core of this misunderstanding is the distinction between attitude and behaviour. While the media can undoubtedly influence community attitudes, the link between attitude change and behaviour change is far from clear. For example, a recent OECD (1994) report was critical of attempts to modify road user behaviour through attitude change, due to research indicating that attitude is not a valid indicator of behaviour. Indeed, the evidence suggests that it was the introduction of RBT in Australia which has had the most significant impact on driver behaviour, and that this subsequently contributed to changes in community attitudes towards drink driving.

In summary, the available evidence suggests that mass media campaigns can not directly influence driver behaviour. Rather, *"the media is capable of imparting knowledge, of creating an awareness, of demonstrating desirable safe behaviours and of portraying consequences"* Elliott (1993, p.7). In this way, mass media can contribute to improved road user behaviour by creating a climate of opinion supportive of other measures and by 'signposting' the need for behaviour change (Elliott, 1992).

DISCUSSION

The case studies illustrate the paradox that certain road safety measures popular with the general community have not proven cost-effective when subjected to rigorous evaluation. A range of factors appear to contribute to this paradox, including the role of the media in shaping and reinforcing public perceptions and beliefs. However, on close inspection, the main contributing factor appears to be misconceptions held by the public about the causes of crashes and/or the nature of road user behaviour. The case studies suggest that the public often do not appreciate the complexities involved in modifying road user behaviour. In particular, there is a tendency for the public to see education as sufficient to alter behaviour. In contrast, the available evidence indicates that while education is generally a necessary factor, it is rarely sufficient (by itself) to motivate behaviour change (RTA, 1995b).

The case studies also demonstrate the problems that can arise if the implementation of behavioural measures is driven by 'common sense' or intuition. To guard against this, a number of authors have published sets of principles or guidelines which can assist in the development and assessment of behavioural road safety measures (eg. Elliott, 1992; RTA, 1995b).

However, the findings do not necessarily imply that road safety authorities should simply ignore public perceptions about potential solutions. As noted earlier, some very successful behavioural approaches, such as RBT, have strong community support. Moreover, in some of the cases where public perceptions are not consistent with the available evidence, there may still be a 'kernel of truth'

in the public view. For example, the success of educational approaches in other domains suggests that the possibility of developing more effective driver training programs should not be dismissed out of hand. Indeed, some interesting directions for future research and development in driver training were outlined in this paper. Therefore, while intuitive appeal should not be sufficient to justify the implementation of a measure, it can provide a catalyst (or even a pointer) for further research and development. However, the resources allocated to these tasks would need to be balanced against other road safety priorities.

In addition, it could be argued that road safety authorities should be more active in 'shaping' community perceptions about successful behavioural approaches. Firstly, promoting successful cases will heighten public support, and possibly compliance, with these measures. For example, it has been suggested that *"the dramatic drop in road deaths which accompanied RBT in NSW played a major role in raising community support for drink-driving legislation"* (FORS, 1986 in Watson & Booth, 1992, p.212). Secondly, this strategy should reduce any public dissatisfaction arising from the failure of road safety authorities to introduce measures with high intuitive appeal. Finally, the more the public learns about successful behavioural measures, the more they may be prepared to accept new approaches which build on these measures. This would facilitate the political acceptance of these new approaches.

CONCLUSION

The case studies reviewed in the paper confirm the need for road user safety measures to be based on sound behavioural principles, rather than on 'common sense' or intuition. They illustrate that the complexity of human behaviour often defies simple explanation, while the modification of entrenched behaviours is rarely straightforward. It provides a warning against implementing measures which have not been adequately conceptualised or reviewed to assess their likely impact on driver behaviour.

However, road safety authorities should not simply ignore public perceptions about potential solutions to the road toll. When supportive of successful measures, public perceptions can prove a valuable force for encouraging safe behaviours. Greater efforts to 'shape' or harness public perceptions by promoting successful measures may also create a climate of acceptance for new measures.

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